the approach of the cheapest drug in the market, only three regimens are covered by the APAC: cisplatin+docetaxel (574BRL~179USD), carboplatin+docetaxel (1,002BRL~313USD) and carboplatin+paclitaxel (984BRL~307USD). In addition, with the exception of target therapies, all regimens are recommended for 21 days, being two months of APAC correspondent to 3 cycles. Considering this time mismatch, only cisplatin+docetaxel fits the APAC. **CONCLUSIONS:** Our analysis indicated that patients may not have access to recommended treatment because the reimbursement system is not updated to the advent of new technologies.

PCN65
A PHARMACOECONOMIC ANALYSIS OF COSTS FROM THE TUMOR BANK OF THE INSTITUTO NACIONAL DE CANCEROLOGIA MEXICO
Báez-Revueltas FB, Ruiz-Godoy LM
Instituto Nacional de Cancerología, Mexico City, Mexico
OBJECTIVES: To estimate the budgetary impact of the samples produced by the Tumor Bank of the 'Instituto Nacional de Cancerología' of Mexico in order to set a recuperation fee for the samples that provides from the perspective of the Health Sector of Mexico. **METHODS:** The study was an observational, retrospective review of the direct medical costs (CDMs) of each of the processes involved in the cryopreservation of samples collected at the tumor bank, on a per sample basis. Including materials, laboratory tests, personnel and administration costs. Materials and labor costs were determined from hospital information. Costs were determined depending on the sample: plasma, tissue and biopsy and costs were calculated depending on the process required to preserve each kind of sample. Sensitivity analysis was performed using bootstrap. **RESULTS:** Recuperation costs range from 130 to 155 USD. These costs were considered on a five-year time frame for the maintenance per sample, which is the average time a sample is kept in the bank. **CONCLUSIONS:** This cost analysis, perceive an adequate recuperation fee per sample needed in order to guarantee the correct development of the bank.

PCN66
SOBREVIDA DE CINCO ANOS E FATORES ASSOCIADOS AO CÂNCER DE BOCA PARA PACIENTES EM TRATAMENTO ONCOL"GICO AMBULATORIAL PELO SISTEMA ÚNICO DE SAÚDE, BRASIL
Cherchiglia ML[1], Bonfante GM[1], Machado CJ[1], Souza PE[2], Andrade EI[1], Acurcio FD [3]
[1]*Federal University of Minas Gerais, Belo Horizonte, Brazil,* [2]*Pontifícia Universidade Católica de Minas Gerais, Belo Horizonte, Brazil,* [3]*College of Pharmacy, Federal University of Minas Gerais, Belo Horizonte, Brazil*
OBJETIVOS: Analisar a sobrevida específica de cinco anos e fatores associados para câncer de boca no Brasil **MÉTODOS:** Trata-se de coorte retrospectiva, cuja fonte de dados foi a Base Onco, que realizou o relacionamento probabilístico-determinístico de todos os registros de autorização para radioterapia e/ou quimioterapia pelo Sistema Único de Saúde, entre 2000 e 2006, gerando-se cadastro único para cada paciente. O evento de interesse foi o tempo decorrido entre o diagnóstico do câncer de boca e o óbito por este câncer. O Modelo de Regressão de Cox foi utilizado para avaliar os fatores individuais associados ao evento de interesse. **RESULTADOS:** O presente estudo incluiu os pacientes diagnosticados entre 2002 e 2003 com câncer de boca, exceto lábio, e idade entre 19 e 100 anos (N = 6.180). A taxa de sobrevida específica em cinco anos foi de 60%. Foram associados à menor sobrevida específica: ter idade > 40 anos; apresentar estádio III ou IV; localização em língua, assoalho de boca e base de língua; não realizar tratamento cirúrgico, realizar somente quimioterapia ou radioterapia e quimioterapia e residir em determinados estados do Brasil. **CONCLUSÕES:** Os resultados reforçam a necessidade de incluir a avaliação das disparidades dos territórios de planejamento como possibilidade para incrementar as ações de saúde e melhorar os indicadores de sobrevida

PCN67
CHANGE IN THE DEMOGRAPHIC PROFILE AND IMPACT IN THE MORTALITY OF MELANOMA AND LUNG CANCER IN PUERTO RICO 2000-2010
Orengo JC[1], Arbalaez F[1], Lutz M[2], Baker-Ivey T[3], Marques-Goyco C[1], Monsanto H[4], Green VS[5]
[1]*MSD Caribbean Region, Carolina, PR, PR,* [2]*MSD Caribbean Region, San José, Costa Rica,* [3]*MSD Caribbean Region, Kingston, Jamaica,* [4]*MSD Latin America Region, Carolina, PR,PR,* [5]*Ponce Health Sciences University, Ponce, PR,PR*
OBJECTIVES: The demographic profile of Puerto Rico is changing; according the 2000 and 2010 Census of the Population, Puerto Rico has 3810,605 and 3,722,133 inhabitants, respectively. In this period the population of 65 years or older increased from 11.2% to 15%; the median age increased from 33.8 years in 2004 to 37.0 years in 2010. The extent to which these population changes affect cancer mortality is not known. The objective was: to assess the impact of changes in the demographic profile of Puerto Rico from 2000 until 2010 on melanoma and lung cancer mortality. **METHODS:** The method of Bashir and Esteve (2000) was applied in this study. The baseline group was the year 2000 and the comparison group the year 2010. The mortality of these groups was assessed according: population size, structure of the population and risk. The population was age adjusted. The mortality of melanoma and lung cancer is from the National Centre of Health Statistics and the population from the Census Bureau (2000, 2010). **RESULTS:** The net change in melanoma mortality was one death; there was an increase of 6 deaths due to change in the structure and a decrease of 5 deaths due to change in the size (1) and due to risk (4). Net change in lung mortality was 22 deaths; an increase of 166 deaths due to change in the structure and a decrease of 144 deaths, 14 due to change in the size and 130 due to risk. **CONCLUSIONS:** Melanoma and lung cancer mortality in Puerto Rico has been affected by the change in the demographic profile, resulting in an increase in the number of deaths for these two types of cancer. The scope of cancer health services should be evaluated in light of this demographic change.

CARDIOVASCULAR DISORDERS – Clinical Outcomes Studies

PCV1
COSTO-EFECTIVIDAD DE UN PROGRAMA DE NEFROPROTECCION EN UNA COHORTE DE 17.000 PACIENTES CON ENFERMEDAD RENAL CRONICA AFILIADOS A UNA ASEGURADORA EN SALUD EN COLOMBIA
Guarin NE[1], Arevalo HO[1], Moreno JA[1], Diaz JA[2], Muñoz-Galindo IM[1]
[1]*Salud Total EPS, Bogotá D.C., Colombia,* [2]*Universidad Nacional de Colombia, Bogotá D.C., Colombia*
La enfermedad renal crónica (ERC) es una condición de salud pública en aumento en Colombia y en el mundo. La intervención temprana de los factores de riesgo disminuye su impacto en la morbilidad, mortalidad y costos de atención.**OBJECTIVOS:** Evaluar la costo-efectividad de un programa de nefroprotección en una cohorte de pacientes con ERC, hipertensión arterial (HTA) y/o diabetes mellitus tipo II (DM), afiliados a una aseguradora en salud en Colombia. **METODOLOGÍAS:** Se construyó un modelo de Markov en MS Excel ® para representar la historia natural de la ERC considerando 4 estadios de la enfermedad según su progresión, comparando tres alternativas de intervención: atención regular de usuarios sin programa (alternativa A), programa de nefroprotección inicial (alternativa B) y programa de nefroprotección avanzado (alternativa C). Los costos directos fueron incluidos, de acuerdo con la información disponible en la aseguradora. La medida de resultado fueron Años de vida ajustados por calidad (AVAC) tomados de la literatura. Las probabilidades de transición se calcularon a partir del seguimiento de 16.992 pacientes con diagnóstico de ERC, HTA y/o DM, mayores de 18 años de edad, en 16 ciudades del país, durante los años 2010 a 2013. El horizonte temporal fue la vida. La perspectiva fue del tercer pagador. Se realizaron análisis de sensibilidad determinísticos y probabilísticos. **RESULTADOS:** La alternativa B mostró un comportamiento dominado. El análisis de costo-efectividad entre la alternativa A y C muestra un ICER de USD $ 4.826,51 por AVAC a favor de C. **CONCLUSIONES:** Dada la disposición a pagar de 1 PIB per cápita para el país, el programa de nefroprotección avanzado es una opción muy costo-efectiva. Esta evaluación puede ayudar a los tomadores de decisiones a mejorar la asignación de recursos en países en vías de desarrollo al estimular la implementación de estrategias preventivas en patologías crónicas.

PCV2
EFFECTIVENESS OF THE ST2 FOR PROGNOSIS IN HEART FAILURE: SYSTEMATIC REVIEWS
Kim S
National Evidence-based Collaborating Agency, Seoul, South Korea
OBJECTIVES: ST2 reflects activity of the cardioprotective signal and is a prognostic marker in heart failure. The aim is to assess the effectiveness of the ST2 for determination of the prognosis of patient with heart failure. **METHODS:** We searched the 8 Korean databases and overseas databases including Ovid-MEDLINE, Ovid-EMBASE and Cochrane Library. A total 365 studies were searched through search strategy and total of 19 studies were included in the final assessment by the selection criteria. Each of the stages from literature search to application of selection standards and extraction of data were carried out independently by 2 researchers. We used tools of Scottish Intercollegiate Guidelines Networks(SIGN) for assessment of the quality of literature. **RESULTS:** The effectiveness of the ST2 was assessed by means of association with prognosis(risk ratio(RR) or odds ratio(OR), accuracy of forecasting of the prognosis, stratification of risk), correlation with the comparative test and relevance with clinical symptoms. The RR or OR of the death arising from ST2 was 1.01~4.56, the RR of hospitalization was 1.054~2.4. On the other hand, RR of hospitalization of BNP was 1.15~2.0, the RR or OR of death arising from NT pro-BNP was 0.19~1.241. The sensitivity/specificity of the test was respectively 64~87%/51~82% and AUC values were 0.689~0.84. The stratification of risk (NRI values) on the death rate were reported to be significant at 9.4 and 9.9 in the 2 papers, respectively, the other 1 paper reported stratification of risk of the death rate of 0.049 and stratification of risk of hospitalization rate of 0.0638. The correlation coefficients with BNP was 0.16~0.409 and with NT pro-BNP was 0.28~0.523. The correlation coefficient with the peak VO2was 0.30 and with 6-minute walk distance was 0.22. **CONCLUSIONS:** The ST2 is effective in determining the prognosis of patients with heart failure and useful in treating heart failure.

PCV3
AN OPEN LABEL, ONE ARM STUDY TO EVALUATE THE EFFICACY AND SAFETY OF CEREBROLYSIN IN PATIENTS WITH ACUTE SEVERE ISCHEMIC STROKE IN MEXICO
Martinez Sánchez BR[1], Hernández Hernandez JJ[1], Franco Del Águila DI[1], Gryzbowski Gainza E[2], Paz Ballesteros WC[2], Herrera Rojas J[2], Peniche Otero G[2], Marroquín Y[3], Zambrano Velarde LE[1]
[1]*Cruz Verde, Guadalajara, Mexico,* [2]*Information Technology Squad, SA de CV, Distrito Federal, Mexico,* [3]*EVER Pharma México, S.A. de C.V, Distrito Federal, Mexico*
OBJECTIVES: We aim to evaluate the efficacy and safety of cerebrolysin in Mexican patients with acute severe ischemic stroke (ASIS) and to describe their demographic and clinical characteristics along with their comorbidities and adverse events. **METHODS:** Open label, one arm, and dose decreasing exploratory study in 30 consecutive patients from "Unidad Hospitalaria Cruz Verde Dr. Delgadillo Araujo" with ASIS starting within 48 hours from the onset of stroke; they received 50 ml of intravenous cerebrolysin daily for 10 days followed by 10 days of 30 ml. All patients underwent CT scan and were examined using the National Institutes of Health Stroke Scale (NIHSS) score and Modified Rankin Scale (≥ to 12 and ≥ 3, respectively) score at baseline as well as on day 15 after hospital discharged. Difference between measures was evaluated with paired Student's t statistic. **RESULTS:** The patients mean age was 60.26 ± 11.2 years, 16 (53%) were male and a majority were between 50-70 years (60%). 19 patients reported at least one physical comorbidity (63.3%), the most frequently reported comorbidities were hypertension, diabetes mellitus and atrial fibrillation (n=10, 33%; n=9, 30%; n=1, 3% respectively). Pretreatment mean score on the NIHSS scale was 20.4, SD 3.9, 95 CI [18.9 - 21.82]; mean Modified

Rankin Scale (mRs) was 3.8 , SD 0.8, 95 CI [3.4 - 4.1]. At day 15 follow-up NIHSS, was 11; SD 4.5; 95 CI [9.3 - 12.8]; mean mRs score was 1.9, SD 0.7, 95 CI [1.7 - 2.2], (p = 0.000 and 0.000 respectively).Only one patient report nightmares as adverse event. **CONCLUSIONS:** The current study demonstrate that cerebrolysin treatment improves functional outcome safely in Mexican patients with ASIS. Future double-blind studies with larger sample sizes will further help to explore causal benefits of this drug in stroke outcome.

PCV4

A PHYSICIAN-CENTERED INTERVENTION TO IMPROVE CONTROL OF BLOOD PRESSURE: SYSTEMATIC REVIEW AND META-ANALYSIS

Lima KM[1], Ribeiro RA[1], Ziegelmann P[2], Leal L[1], Schmidt F[3], Polanczyk CA[1]
[1]*Hospital Moinhos de Vento, Porto Alegre, Brazil,* [2]*, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil,* [3]*Hospital de Clínicas de Porto Alegre, Porto Alegre, Brazil*

OBJECTIVES: To review trials of physician-centered interventions to reducing systolic blood pressure (SBP) and diastolic blood pressure (DBP). **METHODS:** Systematic review and meta-analysis. We searched MEDLINE, EMBASE and Cochrane Central for all-language articles up to September 2014. We included randomized controlled trial (RCT) of physician-centered interventions for hypertension compared with usual care or minimal intervention in primary care patients. Data were pooled using a random effect meta-analysis model. The effect were expressed as the weighted mean difference (WMD). **RESULTS:** Twenty-five trials of 7595 citation were included. Seventeen studies were cluster RCT, one trial was factorial and cluster trial. The remaining seven studies were randomized at individual patient level; five of them used a two-by-two factorial design. Two studies did not report any estimates of variance. Overall, 23 trials (43.489 participants) was contribute to the meta-analysis. The physician-centered intervention were categorized as computer decision support (6 trials), stepped treatment algorithm (6), Medical Education (4), Audit and feedback (3) and Multifaceted (4). Methodological quality of included studies was rather low. Only interventions that the main focus were stepped treatment algorithm showed significant reductions in blood pressure: weighted mean difference, systolic - 4.2 mmHg; 95% confidence interval -5.3 to -3.2; I^2, 80.1% and diastolic -1.6 mmHg; 95% confidence interval -2.8 to -0.49; I^2. 93.4%. For the remaining five categories did not show to reducing blood pressure. Subgroup analyses by study design explained considerable heterogeneity in stepped treatment algorithm effect. **CONCLUSIONS:** Physician-centered interventions based in stepped treatment algorithm showed significantly reductions of systolic and diastolic blood pressure. The magnitude of reduction in blood pressure is likely to prevent stroke and death in patients.

PCV5

ANTIPSYCHOTIC EXPOSURE AND RISK OF STROKE: A SYSTEMATIC REVIEW AND META-ANALYSIS OF OBSERVATIONAL STUDIES

Hsu W[1], Esmaily-Fard A[2], Lee C[3]
[1]*National Taiwan University Hospital, Taipei City, Taiwan,* [2]*The University of Texas MD Anderson Cancer Center, Houston, TX, USA,* [3]*National Taiwan University Hospital, Yunlin Branch, Douliou, Taiwan*

BACKGROUND: Use of antipsychotic medications has been associated with increased risk of cerebrovascular events; however, this association remains questionable given conflicting evidence in the literature. **OBJECTIVES:** We conducted a systematic review and meta-analysis to determine the risk of stroke with the use of antipsychotic medications. **METHODS:** All articles published between 1970 and February 2015 were identified by comprehensively searching PubMed, MEDLINE and EMBASE without language restrictions. Observational studies comparing stroke outcomes in antipsychotic patients with non-users were selected. Two authors independently extracted study characteristics and indicators of study quality. Newcastle-Ottawa Scale was adopted to assess risk of bias. Pooled odd ratios (ORs) and heterogeneity (I2) were estimated on the basis of random effects models. **RESULTS:** We identified 22 potentially relevant studies from 1,171 citations. Of these, 9 studies (3 cohort, 5 case–control and 1 case-case-time-control) with a total of 155,789 subjects and 10,203 cases of stroke were eligible for final analysis. Use of antipsychotics was associated with a significantly higher risk of developing stroke [OR 1.57, 95% confidence interval (CI) 1.29-1.98, I2 = 92.4%]. The pooled OR for stroke was 1.58 [95% CI 1.01-2.49, I2 = 68.4%] with exposure to conventional antipsychotics and 1.06 [95% CI 0.59-1.89, I2 = 56.2%] with exposure to atypical antipsychotics. Subgroup analysis of conventional antipsychotics showed elderly patients over 64 years old were at lower risk for stroke [OR 1.37, 95% CI 0.87-2.17, I2 = 64.5%]. Due to limited data on individual agents, only Risperidone was evaluated in the subgroup analysis of atypical antipsychotics. Risperidone users were less likely to develop stroke than non-users of antipsychotics [OR 0.63, 95% CI 0.33-1.17, I2 = 55.2%]. **CONCLUSIONS:** Exposure to conventional antipsychotic was associated with a significant increase in stroke risk. Nonetheless, use of atypical antipsychotics revealed lower risk of stroke. Given heterogeneity among eligible studies, additional research is needed.

PCV6

BURDEN OF HEART FAILURE IN LATIN AMERICA: A SYSTEMATIC REVIEW AND META-ANALYSIS

Ciapponi A, Bardach A, Calderón M, Alcaraz A, Matta MG, Chaparro M, Soto N
Institute for Clinical Effectiveness and Health Policy (IECS), Buenos Aires, Argentina

OBJECTIVES: Heart failure (HF) is a common clinical syndrome representing the end-stage of several cardiac diseases. Our objective was to estimate the burden of heart failure in Latin America. **METHODS:** A systematic review and meta-analysis was performed. We searched in MEDLINE, EMBASE, LILACS, and CENTRAL from January 1994 to June 2014. We included non-comparative data from experimental and observational studies. No language restriction was imposed. We included studies with samples of at least 50 participants of 18 years of age or older with HF. The outcomes analyzed were incidence, prevalence, hospitalization rates and case fatality ratios of HF at different time points, length of stay and mortality. **RESULTS:** The search retrieved 4792 references of which 143 studies were finally included. Most were conducted in South America (92%), particularly in Brazil (64%). The mean age was 60 ± 9 years and the mean ejection fraction was 36 ± 9%. Most studies evaluated more than one etiology (79%) but the etiology more studies exclusively was Chagas disease (13%). The incidence of HF ranged from 199 to 557 cases per 100,000 person-years and the pooled prevalence was 1%, being higher in older populations. Hospitalization rates in patients with HF ranged from 28 to 31% at different time points, and the median length of stay was 7.0 days. In-hospital mortality was 11.7%, being higher in patients with worse ejection fraction, with ischemic and with Chagas disease. Mortality at one year was 24.52% (95%CI 19.42 to 30.02). **CONCLUSIONS:** This SR of HF in Latin America, could help decision-makers to design better preventive strategies, and guide effective patient-centered care.

CARDIOVASCULAR DISORDERS – Cost Studies

PCV7

BUDGET IMPACT ANALYSIS OF THE USE OF ALTEPLASE IN THE TREATMENT OF ACUTE ISCHAEMIC STROKE IN MEXICO

Huicochea-Bartelt JL[1], Palacios E[2], Zapata L[2], Herran S[1]
[1]*Boehringer Ingelheim, Distrito Federal, Mexico,* [2]*Guia Mark, Distrito Federal, Mexico*

OBJECTIVES: To estimate the economic impact of the use of alteplase versus best supportive care (BSC) in patients with acute ischemic stroke in Mexico. **METHODS:** A decision tree cost-effectiveness (CE) model assessed the treatment related cost for Alteplase and BSC related to two mayor disease branches: with or without intracranial hemorrhage. Terminal nodes in each arm included death, independent- or dependent survival. Published results of head to head clinical trials efficacy inputs populated the model. Treatment algorithm was obtained from the local governmental guide. Public institutional direct medical costs (2014 purchases and price tabulators) where retrieved to adopt the national health system perspective. Governmental databases and 2014 purchases provided the epidemiology inputs. A five year forecast estimated the budget impact of the use of alteplase versus BSC. **RESULTS:** 7,976 patients yearly were calculated to require medical attention due to an acute ischaemic stroke in Mexico. Mean saving per patient in the alteplase versus BSC arm was estimated to be US$67,142.76 at the CE model. 16% versus 12% positive response to treatment was seen at alteplase and BSC arms respectively. Starting at a 4% Market share level, and assuming an increasing share at a 1% rate per year, potential savings for new cases at year five (8% share) were estimated to be as high as US$35,342,527.00. **CONCLUSIONS:** At a better response rate with lower costs of treatment, alteplase was estimated to be a cost-saving therapy versus BSC in a CE model. In a five year budget impact analysis, this novel alternative showed to bring potential savings in the public Mexican institutional context versus BSC. The savings proportionally increase with a higher levels of patients treated and market share.

PCV8

BUDGET IMPACT ANALYSIS OF THE USE OF TENECTEPLASE IN THE TREATMENT OF ACUTE MYOCARDIAL INFARCTION IN MEXICO

Huicochea-Bartelt JL[1], Palacios E[2], Zapata L[2], Herran S[1]
[1]*Boehringer Ingelheim, Distrito Federal, Mexico,* [2]*Guia Mark, Distrito Federal, Mexico*

OBJECTIVES: To estimate the economic impact of the use of tenecteplase versus streptokinase in patients with acute myocardial infarction (AMI). **METHODS:** A decision tree cost-effectiveness (CE) model assessed the treatment related cost for tenecteplase and streptokinase related to two mayor disease branches: with or without acute reperfusion therapy. In the reperfusion arm, terminal nodes included none or one or more complications; those without therapy could only survive or die. Complications comprised death, reinfarction, cardiac failure, cerebral infarction, minor and mayor bleedings and intracranial hemorrhage. Published results of head to head clinical trials or indirect comparisons efficacy inputs populated the model. Treatment algorithm was obtained from the local governmental guide. Public institutional direct medical costs (2014 purchases and price tabulators) where retrieved to adopt the national health system perspective. Governmental databases and 2014 purchases provided the epidemiology inputs. A five year forecast estimated the budget impact of the use of tenecteplase versus streptokinase. **RESULTS:** 20,002 patients yearly were calculated to require medical attention due to an AMI in Mexico. Mean saving per patient in the tenecteplase versus the streptokinase arm was estimated to be US$1,920.00 at the CE model. 98% versus 93% positive response to treatment was seen at tenecteplase and streptokinase arms respectively. Starting at a 3% Market share level, and assuming an increasing share at a 3% rate per year, potential savings for new cases at year five (15% share) were estimated to be as high as US$16,371,461.00. **CONCLUSIONS:** At a better response rate with lower costs of treatment, tenecteplase was estimated to be a cost-saving therapy versus streptokinase in a CE model. In a five year budget impact analysis, this novel alternative showed to bring potential savings in the public Mexican institutional context versus streptokinase. The savings proportionally increase with a higher market share.

PCV9

IMPACTO ORÇAMENTÁRIO DO EVEROLIMO, SIROLIMO E TACROLIMO PARA IMUNOSSUPRESSÃO EM TRANSPLANTADOS CARDÍACOS NO SISTEMA PÚBLICO DE SAÚDE DO BRASIL

Schneiders RE, Bastos EA, Domingues PH, Xavier LC, Reis FC, Alexandre RF, Nascimento Junior JM
Brazilian Ministry of Health, Brasília, Brazil

OBJETIVOS: Analisar o impacto orçamentário da do everolimo, sirolimo e tacrolimo para transplantados cardíacos no Sistema Público de Saúde do Brasil (SUS). **MÉTODOS:** Para estimar a população que realizou transplante cardíaco no Brasil passível de utilizar esses medicamentos, desenhou-se coorte hipotética a partir do número de transplantes de coração no Brasil entre 1999 e 2013, obtido por meio do Sistema de Informações do SUS, e da taxa anual de sobrevida ao longo de 15 anos, extraída de estudo de coorte multicêntrico internacional. Considerando que os medicamentos em análise estão disponíveis no SUS para transplantados